



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**  
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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
07/446,235	12/04/89	BRAKEL	EN247

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KUNZ, G EXAMINER	
ART UNIT	PAPER NUMBER
1803	17

DATE MAILED: 02/10/93

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

The holding of abandonment mailed Jan. 11, 1993, has been withdrawn.

The response filed Dec. 11, 1992, has been made of record in the file.

The application has been returned to pending status.

Ellen Scott, Supervisory Application Examiner

Serial No. 07/445,235  
Art Unit 1803

-5-

12).

No claim is allowed.

5        THIS ACTION IS MADE FINAL. Applicant is reminded of the  
extension of time policy as set forth in 37 C.F.R. 1.136(a).  
The practice of automatically extending the shortened statutory  
period an additional month upon the filing of a timely first  
10      response to a final rejection has been discontinued by the  
Office. See 1021 TMOG 35.

15      A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL  
ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS  
ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS  
OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION  
IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED  
STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE  
ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE  
20      PURSUANT TO 37 C.F.R. 1.136(a) WILL BE CALCULATED FROM THE  
MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE  
STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM  
THE DATE OF THIS FINAL ACTION.

Papers related to this application may be submitted  
to Group 180 by facsimile transmission. Papers should  
25      be faxed to Group 180 via the PTO Fax Center located in  
Crystal Mall 1. The faxing of such papers must conform  
with the notice published in the Official Gazette, 1096  
OG 30 (November 15, 1989). The CM1 Fax Center number is  
(703) 308-4227.

30      Any inquiry concerning this communication or earlier  
communications from the examiner should be directed to Examiner  
Kunz whose telephone number is (703) 308-3995.

35

*A.K.*  
Gary L. Kunz:glk  
February 27, 1993

*Johnnie R. Brown*  
JOHNNIE R. BROWN  
SUPERVISORY PATENT EXAMINER  
ART UNIT 183

Applicant's arguments presented in the paper filed December 11, 1992 (Paper No. 16) have been fully considered but are not deemed persuasive. First, applicant's claims are not, in fact, limited to partially oligomers but do read on all modified oligomers that are nuclease resistant. Secondly, Inoue et al. clearly teach that a partially modified oligomer with as few as three contiguous phosphodiester bond will form RNase sensitive duplexes with RNA. Consequently, the prior art both discloses oligomers that are resistant to nucleases and yet form RNase-sensitive duplexes with RNA. The fact that applicant is using both of these criteria in a screening assay in no way makes their broad claims unique and unobvious!

Claims 1 - 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons already of record on page 5 - 6 of the Office action mailed June 5, 1992 (Paper No. 12).

Applicant argues against this rejection by incorporating by reference remarks on pages 15 - 21 of their Amendment B filed February 26, 1992 (Paper No. 11).

Applicant's arguments on pages 15 - 21 of Amendment B filed February 26, 1992 (Paper No. 11) have been fully considered but are not deemed persuasive for the reasons already of record on pages 5 - 6 of the Office action mailed June 5, 1992 (Paper No.

June 5, 1992 (Paper No. 12).

5       The applicant argues against rejection on the basis  
that Stein et al. only discloses that the phosphorothioate  
oligomers only hybridize with RNA homopolymers instead of  
RNA with all four natural bases. In addition, the applicant  
10       notes that the oligomers taught by Stein et al. are fully  
modified.

15       Applicant's arguments filed December 11, 1992 (Paper No. 16)  
have been fully considered but are not deemed persuasive. Stein  
et al. shows that the phosphorothioate oligomers form RNA  
20       duplexes that are even more sensitive to RNase H than are  
duplexes of only phosphodiester linkages. Secondly, the claims  
are not limited to partially modified oligomers even though  
25       the specifications describes such partially modified oligomers.

30       Claims 1 - 51 are rejected under 35 USC 103 as being un-  
patentable over Walder et al. in view Inoue et al. for the  
reasons already of record on pages 3 - 5 of the Office action  
35       mailed June 5, 1992 (Paper No. 12).

40       The applicant argues against this rejection on the basis  
that the Walder et al. discloses only methylphosphonate oligomers  
that do not form RNase H sensitive duplexes with RNA but only  
sterically inhibits translation in a cell free systems instead  
45       of an intact cell. The applicant also argues that Inoue et al.  
only discloses partially 2'-O-modified oligomers as a probe of  
RNA structure and not as an antisense inhibitor.  
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Prosecution on the merits of this case is continued in view of the fact that the holding of abandonment mailed January 11, 1993, has been withdrawn and the response filed December 11, 1992 has been made of record in the file.

Claims 1 - 51 are pending in the case.

Claims 1 - 2, 4, 8, 12 - 14, 19, and 42 - 50 are rejected under 35 USC 102(b) as being anticipated by Miller et al. for the reasons already of record on page 2 of the Office action mailed June 5, 1992 (Paper No. 12).

The applicant argues against this rejection on the basis that Miller et al. only discloses oligonucleotides fully modified with methylphosphonates compared to the partially modified oligomers of the claims. Applicant's arguments filed December 11, 1992 (Paper No. 16) have been fully considered, but they are not deemed persuasive.

Applicant does disclose partially modified oligonucleotides that are both resistant to nuclease degradation and yet confer RNase H sensitive to complementary RNA. However, the claims are not specifically limited to the characteristic of RNase sensitivity of the double-stranded DNA/RNA molecule. The instant claims are, in fact, so broad as to read on the completely modified oligomers disclosed by Miller et al.

Claims 1 - 4, 12 - 14, and 42 - 50 are rejected under 35 USC 102(b) as being anticipated by Stein et al. for the reasons already of record on pages 2 - 3 of the Office action mailed